

Seeing Your Immune System

Your immune system works around the clock in thousands of different ways, but it does its work largely unnoticed. One thing that causes us to really notice our immune system is when it fails for some reason. We also notice it when it does something that has a side effect we can see or feel. Here are several examples:

- When you get a cut, all sorts of bacteria and [viruses](#) enter your body through the break in the skin. When you get a splinter you also have the sliver of wood as a foreign object inside your body. Your immune system responds and eliminates the invaders while the skin heals itself and seals the puncture. In rare cases the immune system misses something and the cut gets infected. It gets inflamed and will often fill with pus. Inflammation and pus are both side-effects of the immune system doing its job.
- When a mosquito bites you, you get a red, itchy bump. That too is a visible sign of your immune system at work.
- Each day you inhale thousands of germs (bacteria and viruses) that are floating in the air. Your immune system deals with all of them without a problem. Occasionally a germ gets past the immune system and you catch a cold, get the flu or worse. A cold or flu is a visible sign that your immune system failed to stop the germ. The fact that you get over the cold or flu is a visible sign that your immune system was able to eliminate the invader after learning about it. If your immune system did nothing, you would never get over a cold or anything else.
- Each day you also eat hundreds of germs, and again most of these die in the saliva or the acid of the stomach. Occasionally, however, one gets through and causes food poisoning. There is normally a very visible effect of this breach of the immune system: vomiting and diarrhea are two of the most common symptoms.
- There are also all kinds of human ailments that are caused by the immune system working in unexpected or incorrect ways that cause problems. For example, some people have [allergies](#). Allergies are really just the immune system overreacting to certain stimuli that other people don't react to at all. Some people have diabetes, which is caused by the immune system inappropriately attacking cells in the pancreas and destroying them. Some people have rheumatoid arthritis, which is caused by the immune system acting inappropriately in the joints. In many different diseases, the cause is actu-

ally an immune system error.

- Finally, we sometimes see the immune system because it prevents us from doing things that would be otherwise beneficial. For example, [organ transplants](#) are much harder than they should be because the immune system often rejects the transplanted organ.